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A New Pipehorse (Syngnathidae) from Western Australia, with Remarks on the Subgenera of *Acentronura*

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Abstract *Acentronura* (*Idiotropiscis*) *larsonae* sp. nov. is described from single adult male and female specimens from the Monte Bello Is., W. Australia. This species differs from its most closely related congener, *A. australe* Waite et Hale (type-species of *Idiotropiscis* Whitley, 1947), in having a more elevated and anteriorly protruding frontal ridge, a relatively shorter snout (snout length in HL 3.7–3.8 versus 2.8–3.2), fewer trunk rings (11 versus 12), and in having an exceptionally narrow dorsum on the predorsal trunk rings. Distinguishing features of *Idiotropiscis* (Indo-Pacific) and *Amphelikturus* Parr, 1930 (Atlantic Ocean) are compared, and these taxa are treated as subgenera of *Acentronura* Kaup, 1853.

In early 1984, I received a number of pipefishes for study which were recently collected in Western Australia and elsewhere by Ms. Helen K. Larson, Assistant Curator of Fishes, Northern Territory Museum of Arts and Sciences, Darwin, Australia. Among these, there are two adult representatives of a previously undescribed species referable to the genus *Acentronura* Kaup, 1853. I here describe this unusual "pipehorse" and include remarks on the subgenera of *Acentronura*. Measurements (mm) are, in part, referred to the total length (TL) or head length (HL); other methods are those of Dawson (1977). The holotype has been deposited in the collections of the Northern Territory Museum (NTM), the paratype is in the Gulf Coast Research Laboratory Museum (GCRL), and the holotype of *A. australe* is in the South Australian Museum, Adelaide (SAM).

Acentronura (*Idiotropiscis*) *larsonae* sp. nov.

(Figs. 1–2)

Holotype. NTM S.10805-001 (33.5 mm TL, adult male). Alpha I., Monte Bello Is. (ca. 20°26′S, 115°37′E), Western Australia. Found clinging to *Sargassum* sp. attached to an isolated coral rock on sandy coral rubble bottom in ca. 3 m, 22 April 1983, H. K. Larson and R. Williams, col.

Paratype. GCRL 21518 (33.0 mm TL, adult female), taken with holotype.

Diagnosis. Superior trunk and tail ridges discontinuous; frontal ridge strongly elevated, protruding anteriad in adults; dorsum of predorsal trunk rings exceptionally narrow; snout short, its length >3.5 in HL; trunk rings 11; caudal fin absent in adults.

Description. Superior trunk and tail ridges discontinuous below dorsal-fin base, lateral tail ridge present, inferior trunk ridge ends at anal ring, lateral trunk ridge confluent with inferior tail ridge (Fig. 1). Median dorsal snout ridge low, entire, except for a short distal spine (in holotype) or elevation (in paratype) above nares at confluence with anterior continuations of supraorbital ridges; interorbital narrow, depressed; dorsal rim of orbit flared a little laterad, not elevated strongly dorsad; posterior supraorbital ridges broad and flat in dorsal aspect; frontal ridge compressed laterally, strongly elevated, protruding clearly anteriad, the anterodorsal profile arcuate in lateral aspect; opercular ridge low, entire, angled dorsad toward gill opening; pectoral-fin base without distinct ridges; dorsal-fin base elevated. Trunk strongly compressed laterally; breadth of dorsum of predorsal trunk rings about half that of dorsum of anterior postdorsal tail rings; breadth of trunk at lateral and inferior ridges somewhat greater than that of dorsum of trunk; principal body ridges distinct, little elevated; short, simple, dermal flaps present on eye and on posterodorsal angles of most tail rings, longer simple and branched flaps present elsewhere on head and body. Counts and measurements (mm) of holotype are followed, in parentheses, by those of paratype: rings 11+39 (11+40), dorsal-fin rays 17 (17), subdorsal rings 3+1

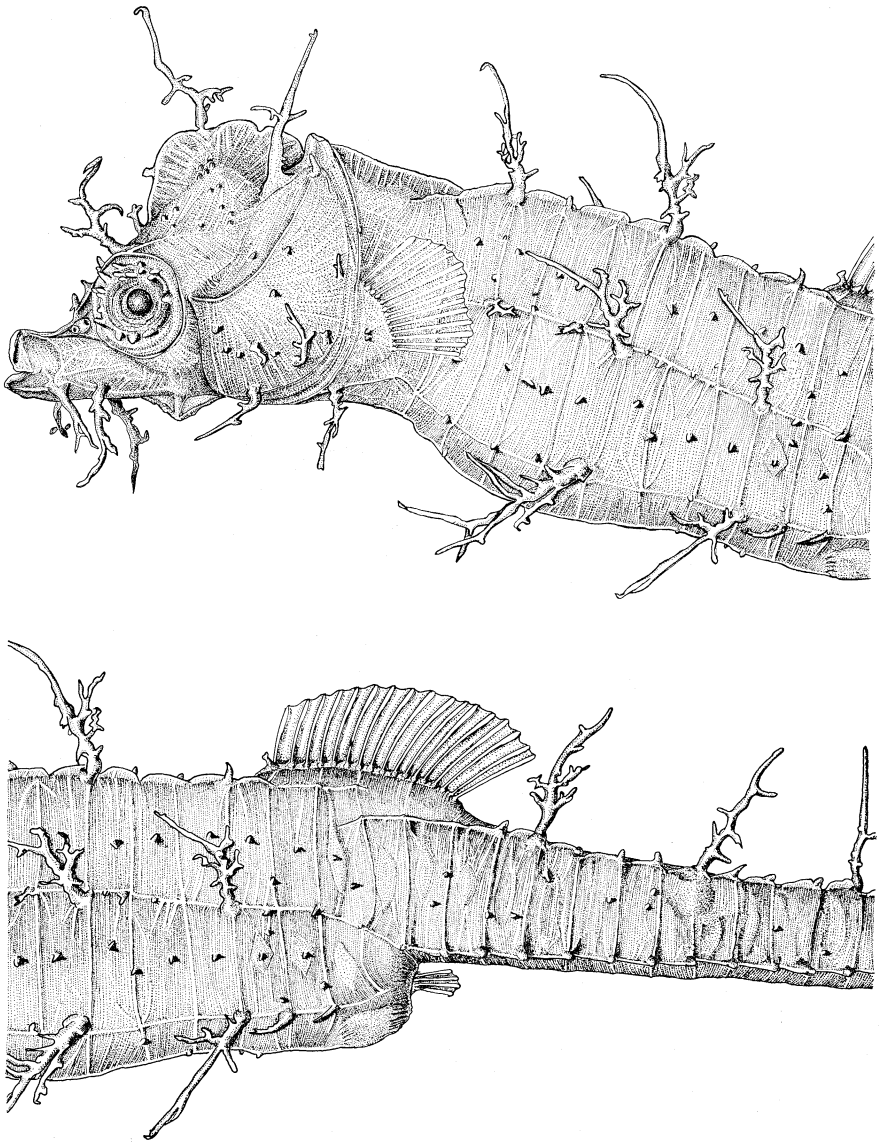

Fig. 1. *Acentronura* (*Idiotropiscis*) *larsonae* sp. nov. Lateral aspect of head and portion of trunk, together with section of body illustrating dorsal and anal fins and configuration of principal body ridges. From adult female paratype, 33.0 mm TL (GCRL 21518).

(2+2), pectoral-fin rays 12, 12 (13, 13), anal-fin rays 4 (4), TL 33.5 (33.0), HL 4.9 (4.8), snout length 1.3 (1.3), snout depth 0.8 (0.9), length of dorsal-fin base 2.8 (2.8), trunk depth 5.0 (4.3), breadth of dorsum of 3rd predorsal trunk ring 0.3 (0.3), breadth of dorsum of 4th postdorsal tail ring 0.6 (0.7), pectoral-fin length 1.3 (1.3). Brood pouch of holotype located below the 8 anterior tail rings; pouch sac-like, opening through an anteromesial pore, with long, slender, pouch plates.

Color in alcohol light tan, markings tan to dark brown (Fig. 2). Head irregularly shaded and blotched with pale and brownish; dorsum of trunk edged with dark brown; with small, diffuse, dark spots on lower part of pectoral-fin base and on inferior ridges of 5th and 8th trunk rings; side of trunk elsewhere irregularly shaded

Fig. 2. *Acentronura* (*Idiotropiscis*) *larsonae* sp. nov., holotype, adult male, 33.5 mm TL (NTM S. 10805-001).

and blotched, with more or less prominent, vertically elongate, pale blotches near middle of 5th and 8th rings; side of tail with 4–5 diffuse brownish bars, with superimposed pale blotches. Side of brood pouch of holotype brown, extensively blotched or mottled with tan; ventral surface of pouch brown, with dark brown edging around pore continued posteriad as a narrow dark median line on anterior half of pouch.

Etymology. Named after Ms. Helen K. Larson, in recognition of her many contributions to my studies on Indo-Pacific pipefishes.

Comparisons. *Acentronura larsonae* is most closely related to *A. australe* Waite et Hale, 1921 (Fig. 3), a species known only from 4–5 specimens collected off southern and southwestern Australia (south of 31°30′S). Among taxa here referred to the genus *Acentronura*, only *A. australe* and *A. larsonae* share the combination of discontinuous superior body ridges and absence of caudal fin in adults. Adult representatives of *A. larsonae* differ from those of *A. australe* in having a more elevated and antierorly protruding frontal ridge, in having fewer trunk rings and pectoral-fin rays (respectively, 11 and 12–13 versus 12 and 14–15), a higher snout length in HL ratio (3.7–3.8 versus 2.8–3.2) and a lower snout depth in snout length ratio (1.0–1.1 versus 1.4–1.6 in *A. australe*). In addition, the extremely narrow dorsum of the predorsal trunk rings clearly distinguishes *A. larsonae* from *A. australe*, wherein this dimension equals or exceeds the breadth of the dorsum of the anterior postdorsal tail rings.

Remarks. *Acentronura gracilissima* (Temminck et Schlegel, 1850), type-species of the genus *Acentronura*, is characterized, in part, by the presence of continuous superior trunk and tail ridges, presence of elongate pouch plates and sac-like brood pouch in adult males, and absence of caudal fin in adults. Pouch larvae of *A. gracilissima* and planktonic juveniles (ca. 15 mm TL), identified as *A. tentaculata* Günther, 1870, have distinct caudal fins and I believe that this fin will be present in young of all species of *Acentronura*.

Whitley (1947) proposed the genus *Idiotropiscis* due to the presence of discontinuous superior trunk and tail ridges in the type-species (*Acentronura australe*), but Fraser-Brunner and Whitley (1949) later considered *Idiotropiscis* to be best treated as a subgenus of *Acentronura*. I agree with this concept and refer *A. larsonae*, also with discontinuous superior ridges, to the subgenus *Idiotropiscis* Whitley.

Acentronura has heretofore been considered an endemic Indo-Pacific genus (Red Sea to Japan) but I am now convinced that the genus *Amphelikturus* Parr, 1930, known from the eastern and western Atlantic Ocean (Dawson, 1982a, b), should also be treated as a subgenus of *Acentronura*. The type-species, *Amphelikturus dendriticus* (Barbour, 1905), agrees with species of *Acentronura* in gross morphology (see Dawson,

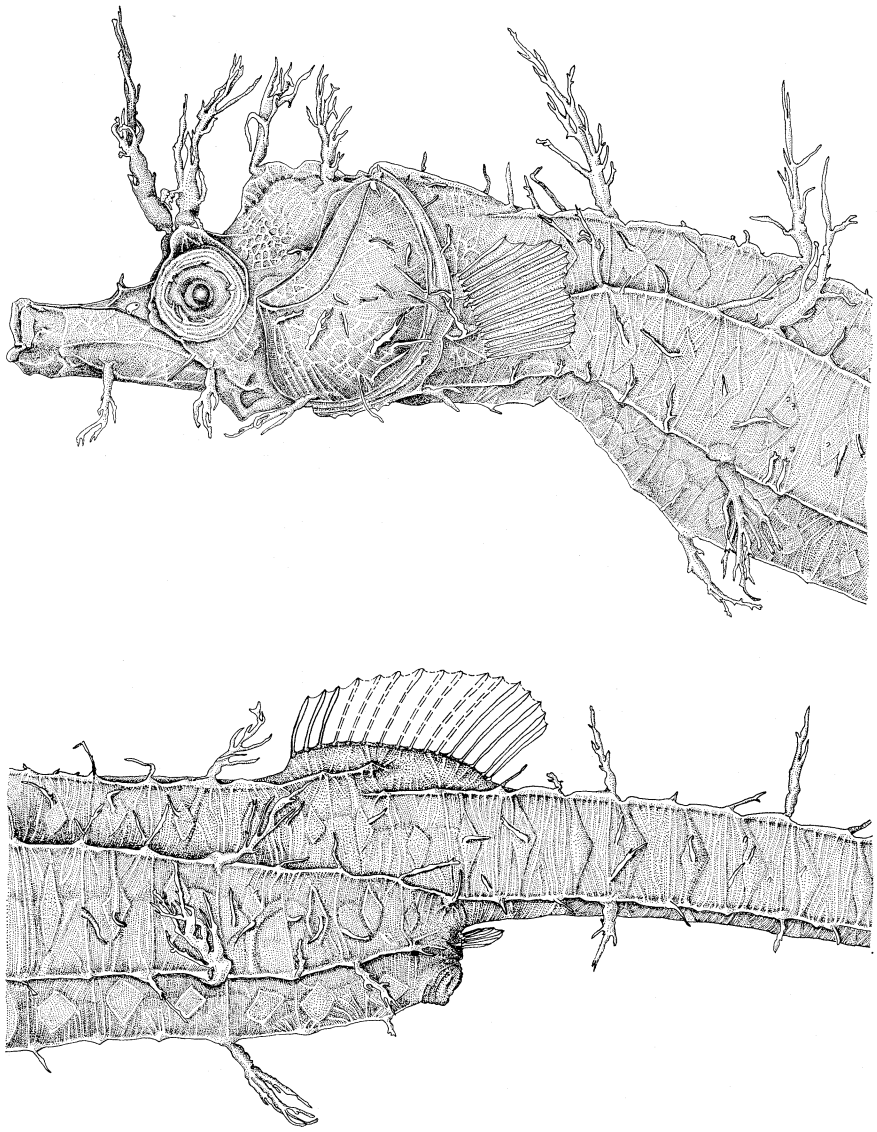

Fig. 3. *Acentronura* (*Idiotropiscis*) *australe* Waite et Hale. Lateral aspect of head and portion of trunk, together with section of body illustrating dorsal and anal fins and configuration of principal body ridges. From holotype, adult female, 53.0 mm TL (SAM F. 719).

1982a, figs. 4, 48, 49), and agrees with species of the subgenus *Idiotropiscis* in the configuration of principal body ridges. In contrast to adult representatives of the Indo-Pacific taxa, a well-developed caudal fin persists in adults of *Amphelikturus*, and adult males of *A. dendriticus* have short and broad, rather than long and slender, pouch plates. Unlike the closed sac-like brood pouch common to Indo-Pacific taxa, the pouch of adult males of *A. dendriticus* is essentially open throughout most of its length, and provided with separate bilateral pouch-folds which are only fused on the midline of the distal 2–3 pouch-rings (Herald, 1959).

Despite differences noted here, I consider these pipehorses to be derived from a common ancestor and that their similarities are best emphasized by the employment of *Idiotropiscis* and *Amphelik-*

turus as subgenera of the genus *Acentronura*.

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西オーストラリアのヨウジウオ科の1新種およびタツノイトコ属の亜属について

C. E. Dawson

西オーストラリア州のMonte Bello島でとれた成熟した雌，雄各1尾にもとづきタツノイトコ属の新種 *Acentronura* (*Idiotropiscis*) *larsonae* を記載した．本種は同属で最も近縁の *A.australe* とは次の点で異なる：1) 前方にとび出した前頭隆起がより高い，2) 吻が短く，頭長は吻長の3.7～3.8倍，3) 胴輪が11個，4) 背鰭前胴輪の背面の幅が非常にせまい．インド・太平洋に分布する *Idiotropiscis* Whitley, 1947 と大西洋の *Amphelikturus* Parr, 1930 はタツノイトコ属 *Acentronura* Kaup, 1853 の亜属とみなす．